

IN THE CLAIMS

1. (Currently amended) A media advancing device for a hardcopy apparatus comprising:

A2 | a main drive roller that advances a media toward at least one overdrive roller having an outer surface and being rotatable for further advancing said media, said outer surface comprising a plurality of openings and a contact region for engaging said media; and

a negative pressure mechanism for creating negative pressure through at least a portion of said openings.

2. (Original) The media advancing device according to claim 1, wherein said negative pressure mechanism comprises at least one vacuum source in communication with at least one vacuum chamber, wherein said vacuum chamber is in communication with at least a portion of said openings.

3. (Original) The media advancing device according to claim 1, wherein said roller is partially housed in at least one slot in said negative pressure mechanism such that said openings provide an entrance for air through said slot into said negative pressure mechanism.

4. (Original) The media advancing device according to claim 2, wherein said roller is partially housed in at least one slot above said vacuum chamber, and said openings are in said contact region and provide the only entrance for air through said slot into said vacuum chamber.

5. (Currently amended) The A media advancing device for a hard copy apparatus according to claim 4, further comprising:

at least one roller having an outer surface and being rotatable for advancing media, said outer surface comprising a plurality of openings and a contact region for engaging said media;

a negative pressure mechanism for creating negative pressure through at least a portion of said openings, wherein said negative pressure mechanism comprises at least one vacuum source in communication with at least one vacuum chamber, wherein said vacuum chamber is in communication with at least a portion of said openings, and wherein said roller is partially housed in at least one slot above said vacuum chamber, and said openings are in said contact region and provide the only entrance for air through said slot into said vacuum chamber; and

at least one shim disposed above said slot and having a gap, said gap aligning over at least a portion of said contact region.

6. (Original) The media advancing device according to claim 5, wherein said shim further comprises at least one transverse rib forming a plurality of smaller gaps.

7. (Original) The media advancing device according to claim 6, wherein said smaller gaps are about equal in size.

8. (Original) The media advancing device according to claim 5, wherein said shim is made of a flexible material.

9. (Original) The media advancing device according to claim 1, wherein said openings are circular.

10. (Original) The media advancing device according to claim 1, wherein said openings are equidistantly spaced apart.

11. (Original) The media advancing device according to claim 1, wherein said outer surface further comprises a coating having a high coefficient of friction.

12. (Original) The media advancing device according to claim 1, wherein said roller further comprises at least one axial exhaust and said negative pressure mechanism comprises at least one vacuum source in communication with said axial exhaust, said axial exhaust being in communication with at least a portion of said openings.

13. (Currently amended) A media advancing device for a hardcopy apparatus comprising:

a main drive roller that advances a media toward at least one overdrive roller having an outer surface with a contact region for engaging said media and rotatable for further advancing said media; and

a negative pressure mechanism for creating negative pressure that is radial to at least a portion of said contact region.

14. (Original) The media advancing device according to claim 13, wherein said outer surface further comprises a plurality of openings and said negative pressure mechanism comprises at least one vacuum source in communication with at least one vacuum chamber, said vacuum chamber being in communication with at least a portion of said openings.

15. (Original) The media advancing device according to claim 14, wherein said roller is partially housed in at least one slot in said negative pressure mechanism such that said openings provide an entrance for air through said slot into said negative pressure mechanism.

16. (Original) The media advancing device according to claim 14, wherein said roller is partially housed in at least one slot above said vacuum chamber, and said openings are in said contact region and provide the only entrance for air through said slot into said vacuum chamber.

17. (Currently amended) The A media advancing device for a hard copy apparatus according to claim 16, further comprising:

at least one roller having an outer surface with a contact region for engaging media and rotatable for advancing said media;
a negative pressure mechanism for creating negative pressure that is radial to at least a portion of said contact region, wherein said outer surface further comprises a plurality of openings and said negative pressure mechanism comprises at least one vacuum source in communication with at least one vacuum chamber, said vacuum chamber being in communication with at least a portion of said openings, and wherein said roller is partially housed in at least one slot above said vacuum chamber, and said openings are in said contact region and provide the only entrance for air through said slot into said vacuum chamber; and

at least one shim disposed above said slot and having a gap, said gap aligning over at least a portion of said contact region.

18. (Original) The media advancing device according to claim 17, wherein said shim further comprises at least one transverse rib forming a plurality of smaller gaps.

19. (Original) The media advancing device according to claim 18, wherein said smaller gaps are about equal in size.

20. (Original) The media advancing device according to claim 17, wherein said shim is made of a flexible material.

21. (Original) The media advancing device according to claim 14, wherein said openings are circular.

22. (Original) The media advancing device according to claim 14, wherein said openings are equidistantly spaced apart.

23. (Original) The media advancing device according to claim 13, wherein said outer surface further comprises a coating having a high coefficient of friction.

24. (Original) The media advancing device according to claim 13, wherein said roller further comprises at least one axial exhaust, said outer surface further comprises a plurality of openings and said negative pressure mechanism comprises at least one vacuum source in communication with said axial exhaust, said axial exhaust being in communication with at least a portion of said openings.

25. (Currently amended) A method of advancing a media in a hardcopy apparatus comprising:

advancing a media with a main roller to contact the a contact region on a at least one overdrive roller having a plurality of openings;

Cond
A2

generating a negative pressure distribution between said media and said contact region wherein said negative pressure is through at least a portion of said openings in said contact region; and

further advancing said media by rotating said roller.
